CLAIMS

1. A method comprising:

shielding a first portion of a surface of an article with a masking system including a cohesive mask in conformal contact with the surface of the article; and

allowing an agent to be applied through a channel, having a dimension of less than 1 millimeter, within the masking system to a second portion of the surface of the article while preventing application of the agent to the first portion with the masking system.

2. A method as in claim 1, the shielding step involving sealing at least a portion of the first portion of the article surface with the flexible surface of the mask.

3. A method as in claim 2, wherein the mask is a flexible mask including a first surface, an opposing second surface, and a plurality of channels passing through the mask and connecting the first surface with the second surface.

4. A method as in claim 2, wherein the mask has a flexible surface, the shielding step involving contacting the first portion of the article surface with the flexible surface of the mask.

5. A method as in claim 2, involving shielding the first portion of the surface by bringing the flexible surface of the mask into conforming contact with the article surface.

6. A method as in claim 4, wherein the article surface is non-planar.

7. A method as in claim 2, wherein the mask is flexible in its entirety.

8. A method as in claim 2, involving shielding the first portion of the article surface with a mask having a polymeric surface.

9. A method as in claim 2, involving shielding the first portion of the article surface by bringing an elastomeric surface of the mask into conformal contact with at least a portion of the first portion.

10. A method as in claim 9, wherein the first portion of the article surface is non-planar.

11. A method as in claim 9, further comprising removing a mask from at least a portion of the first portion of surface of the article while allowing the agent or a product of the agent to remain at the second portion of the surface of the article.

12. A method as in claim 11, further comprising re-placing a mask in relation to the surface of the article, and applying an agent to at least a portion of the first portion of the surface of the article.

13. A method as in claim 12, the re-placing step involving re-orienting a mask in relation to the surface of the article.

14. A method as in claim 12, the re-placing step involving removing the mask from the surface of the article and applying an agent to at least a portion of the first portion of the surface without shielding the surface with the mask.

15. A method as in claim 2, further comprising re-placing a mask in relation to the surface of the article, and applying an agent to at least a portion of the first portion of the surface of the article.

16. A method as in claim 2, wherein a mask of the masking system has a thickness, defining channel length, of no more than about 500 microns.

17. A method as in claim 2, wherein a mask of the masking system includes a plurality of channels within it and the second, unshielded portion of the surface of the article includes a plurality of portions in register with channels of the mask, and the allowing step involves applying the agent through the plurality of channels to the portions of the surface defining the second, unshielded portion.

18. A method as in claim 17, wherein the mask includes at least 100 channels, and at least 50 percent of the channels have a cross-sectional dimension of less than about 200 microns.

19. A method as in claim 18, wherein at least about 98 percent of the channels have a cross-sectional dimension of less than about 200 microns.

20. A method as in claim 19, wherein at least about 98 percent of the channels have a maximum cross-sectional dimension of less than about 200 microns.

21. A method as in claim 20, wherein the mask is a flexible polymeric article.

22. A method as in claim 21, wherein the mask is elastomeric.

23. A method as in claim 18, wherein the mask includes at least about 500, essentially straight, circular cross-sectional channels, each channel of cross-section of less than about 200 microns, and each channel spaced from an adjacent channel by no more than about 400 microns.

24. A method as in claim 23, wherein the plurality of channels are arranged in a grid pattern.

25. A method as in claim 23, wherein the channels have a length-to-diameter ratio of no more than about 5 to 1.

26. A method as in claim 23, wherein the channels have a length-to-diameter ratio of no more than about 2 to 1.

27. A method as in claim 23, the mask including at least about 1,000 channels, each of cross-section of less than about 100 microns and each channel spaced from an adjacent channel by no more than about 200 microns.

28. A method as in claim 27, wherein each of the channels has a cross-sectional dimension of no more than about 50 microns and each channel is spaced from an adjacent channel by no more than about 100 microns.

29. A method as in claim 27, wherein each of the channels has a cross-sectional dimension of no more than about 25 microns and each channel is spaced from an adjacent channel by no more than about 50 microns.

30. A method as in claim 27, wherein each channel has a cross-sectional dimension of no more than about 10 microns.

31. A method as in claim 27, wherein each channel has a cross-sectional dimension of no more than about 5 microns.

32. A method as in claim 27, wherein each channel has a cross-sectional dimension of no more than about 3 microns.

33. A method as in claim 27, wherein each channel has a cross-sectional dimension of no more than about 1.5 microns.

34. A method as in claim 2, wherein the agent is an organic electroluminescent material or a precursor thereof.

35. A method as in claim 34, further comprising allowing an organic electroluminescent material to form from the agent at the second portion of the surface, and establishing electrical communication between the organic electroluminescent material and an electrical circuit.

36. A method as in claim 2, wherein the agent is a liquid or is carried in a liquid.

37. A method as in claim 2, wherein the agent is the product of chemical vapor deposition.

38. A method as in claim 2, wherein the agent is a product of deposition from a gas phase.

39. A method as in claim 38, wherein the agent is a product of e-beam deposition, evaporation, or sputtering.

40. A method as in claim 2, wherein the agent is a product of electrochemical deposition.

41. A method as in claim 2, wherein the agent is a product of electroless deposition.

42. A method as in claim 2, wherein the agent is applied from a fluid precursor through the channel.

43. A method as in claim 42, wherein the fluid precursor comprises a solution or suspension of an inorganic compound and the allowing step comprises allowing the inorganic compound to harden at the second portion of the article surface.

44. A method as in claim 42, wherein the fluid precursor comprises a suspension of particles in a fluid carrier and the allowing step comprises allowing the fluid carrier to dissipate thereby depositing the particles at the first region of the substrate surface.

45. A method as in claim 42, wherein the fluid precursor comprises a chemically active agent in a fluid carrier, and the allowing step comprises allowing the fluid carrier to dissipate thereby depositing the chemically active agent at the first region of the substrate surface.

46. A method as in claim 45, wherein the chemically active agent is a prepolymeric species and the allowing step comprises forming a polymeric article from the prepolymeric species.

47. A method as in claim 45, wherein the chemically active agent is an agent capable of promoting deposition of a material.

48. A method as in claim 42, wherein the agent is an etchant and the method further involves allowing the second portion of the surface of the article to be etched.

49. A method as in claim 2, wherein the agent is an etchant and the method further involves allowing the second portion of the surface of the article to be etched.

50. A method as in claim 2, further comprising removing the flexible surface of a mask of the masking system from the first portion of the article surface while leaving the agent adhered to the second portion of the article surface.

51. A method comprising:

shielding a first portion, having a dimension of less than 1 millimeter, of a surface of an article with a mask while leaving a second portion of the surface of the article remaining unshielded by the mask, by positioning the mask in conformal contact with the surface without degrading a portion of the mask proximate the second portion of the surface; and

applying an agent to the second portion of the surface of the article.

52. A method comprising:

shielding a first portion of a non-planar surface of an article with a mask by bringing a surface of the mask into conformal contact with the non-planar surface of the article; and

allowing an agent to pass through a channel within the mask having a dimension of less than 1 millimeter and to be applied to a second portion of the surface of the article while preventing application of the agent to the first portion with the mask.

53. A method comprising:

shielding a first portion of a surface of an article with a masking system by bringing a surface of the masking system into conformal contact with a surface of the article;

allowing an agent to be applied to a second, unshielded portion of the surface of the article while preventing application of the agent to the first portion of the surface of the article with the masking system;

re-placing the masking system; and

applying an agent to at least a portion of the first portion of the surface of the article.

54. A method as in claim 53, the shielding step involving contacting the first portion of the surface of the article with a portion of a mask, and the re-placing step involving removing the mask from the surface and applying the agent to the first portion without shielding the surface of the article with the mask.

55. A method as in claim 53, the re-placing step involving re-orienting and re-sealing a mask of the masking system in relation to the surface of the article.

56. A method as in claim 53, wherein the masking system includes a second mask, positioned between a source of the agent and a first mask, the first mask positioned between the second mask and the surface of the article.

57. A method as in claim 56, wherein the first mask seals against the surface of the article and the second mask seals against the first mask.

58. A method as in claim 57, wherein each of the first and second masks is a flexible polymeric article.

59. A method as in claim 58, wherein each of the first and second masks is elastomeric.

60. A method as in claim 59, involving applying the agent to the second portion of the surface, re-placing the masking system by removing the second mask from the first mask thereby exposing at least a portion of the first portion of the surface while allowing the first mask to shield another portion of the first portion of the surface, and applying an agent to at least a portion of the first portion of the surface while shielding another portion of the first portion of the surface with the first mask.

61. A method as in claim 59, involving applying a first agent to the second portion of the surface, re-placing the mask by removing the second mask from the first mask thereby exposing at least a portion of the first portion of the surface while allowing the first mask to shield another portion of the first portion of the surface, and applying a second, different agent to at least a portion of the first portion of the surface while shielding another portion of the first portion of the surface with the first mask.

62. A method as in claim 53, involving applying a first agent to the second portion of the surface, re-placing the mask by removing the second mask from the first mask thereby exposing at least a portion of the first portion of the surface while allowing the first mask to shield another portion of the first portion of the surface, and applying a second, different

agent to at least a portion of the first portion of the surface while shielding another portion of the first portion of the surface with the first mask.

63. A method as in claim 62, wherein each of the first and second agents is a precursor of a different organic, electroluminescent material.

64. A method comprising:

shielding a first portion of a surface of an article with a mask;

allowing a fluid to be applied to a second portion of the surface, having a dimension of less than 1 millimeter, while preventing application of the fluid to the first portion with the mask;

allowing a material to harden from the fluid; and

removing the mask from the surface while leaving the article adhered to the second portion of the surface.

65. A method as in claim 64, further comprising re-placing the mask and allowing a fluid to be applied to at least a portion of the first portion of the surface of the article and a material to harden from the fluid at the first portion, and removing the mask while allowing the material to adhere to the first portion of the article.

66. A method comprising:

shielding a first portion, having a dimension of less than 1 millimeter, of a surface of an article with a mask by bringing a surface of the mask into conformal contact with the surface of the article while leaving a second portion of the surface of the article remaining unshielded by the mask;

applying an agent to the second portion of the surface; and

without exposure of the mask to conditions of degradation, removing the mask from the surface thereby leaving the agent at the second portion of the surface and the first portion of the surface free of the agent.

67. An elastomeric article comprising a first surface, an opposing second surface, and a plurality of channels passing through the article and connecting the first surface with the

second surface, at least one of the plurality of channels having a cross-sectional dimension of less than 1 millimeter.

68. An article as in claim 67, wherein the first surface is elastomeric.

69. An article as in claim 67, wherein the article is elastomeric.

70. An article as in claim 69, comprising at least about 100 channels.

71. An article as in claim 70, wherein at least about 50% of the channels have a cross-sectional dimension of less than about 200 microns.

72. An article as in claim 71, wherein at least about 98% of the channels have a cross-sectional dimension of less than about 200 microns.

73. An article as in claim 72, wherein the mask includes at least about 500, essentially straight, circular cross-sectional channels, each channel of cross-section of less than about 200 microns, and each channel spaced from an adjacent channel by no more than about 400 microns.

74. An article as in claim 73, wherein the channels have a length-to-diameter ratio of no more than about 5 to 1.

75. An article as in claim 73, wherein the channels have a length-to-diameter ratio of no more than about 2 to 1.

76. An article as in claim 75, the mask including at least about 1,000 channels, each of cross-section of less than about 100 microns and each channel spaced from an adjacent channel by no more than about 200 microns.

77. An article as in claim 76, wherein each of the channels has a cross-sectional dimension of no more than about 50 microns and each channel is spaced from an adjacent channel by no more than about 100 microns.

78. An article as in claim 76, wherein each of the channels has a cross-sectional dimension of no more than about 25 microns and each channel is spaced from an adjacent channel by no more than about 50 microns.

79. An article as in claim 76, wherein each channel has a cross-sectional dimension of no more than about 10 microns.

80. An article as in claim 76, wherein each channel has a cross-sectional dimension of no more than about 5 microns.

81. An article as in claim 76, wherein each channel has a cross-sectional dimension of no more than about 3 microns.

82. An article as in claim 76, wherein each channel has a cross-sectional dimension of no more than about 1.5 microns.

83. A method comprising:

immobilizing, on average, less than about 1×10^5 molecules at each of a plurality of separate, isolated regions of a surface of an article while leaving regions of the surface of the article intervening the separate, isolated regions essentially free of the molecules.

84. A method as in claim 83, comprising applying the molecules to each of the separate, isolated regions through channels within a mask.

85. A method as in claim 84, comprising sealing a surface of a mask to the surface of the article creating exposed regions of the surface of the article in register with channels of the mask, and applying the molecules to those regions of the surface of the article in register with the channels.

86. A method as in claim 85, the applying step involving applying a fluid containing the molecules to regions of the surface of the article in register with channels of the mask.

87. A method as in claim 83, comprising applying, on average, less than about 1×10^{4} molecules to each of the separate, isolated regions.

88. A method as in claim 83, comprising applying, on average, less than about 1×10^{3} molecules to each of the separate, isolated regions.

89. A method as in claim 83, comprising applying, on average, less than about 1×10^{2} molecules to each of the separate, isolated regions.

90. A method as in claim 83, comprising applying, on average, less than about 1×10 molecules to each of the separate, isolated regions.